

AMENDMENTS TO THE CLAIMS

1-8. (Cancelled)

9. (Original) A QCTC (Quasi-Complementary Turbo Code) generating apparatus comprising:

a turbo encoder having a plurality of constituent encoders, for receiving information bits, generating an information symbol sequence and a plurality of parity symbol sequences by encoding the information bits symbol sequence, and outputting an information symbol sequence and the plurality of parity symbol sequences, each constituent encoder for generating at least one parity symbol sequence corresponding to at least one parity symbol sequence from another constituent encoder;

an interleaver for individually interleaving the information symbol sequence and the parity symbol sequences;

a multiplexer for generating a new parity symbol sequence by multiplexing the interleaved symbols of the corresponding parity symbol sequences;

a symbol concatenator for serially concatenating the interleaved information symbol sequence and the new parity symbol sequence; and

a QCTC generator for generating a sub-code of a QCTC with a given code rate by recursively selecting a predetermined number of symbols from the serially concatenated symbol sequence at a given starting position according to the code rate.

10. (Original) The QCTC generating apparatus of claim 9, wherein the interleaver individually interleaves the information symbol sequence and the plurality of parity symbol sequences by PBRO (Partial Bit Reversal Order) interleaving.

11. (Original) The QCTC generating apparatus of claim 9, wherein the given starting position is the position of a symbol following the last symbol selected for the previous transmission.

12. (Original) The QCTC generating apparatus of claim 9, wherein the QCTC generator comprises:

- a symbol repeater for repeating the serially concatenated symbol sequence; and
- a symbol selector for generating the sub-code by selecting the predetermined number of symbols from the repeated symbol sequence according to the given code rate.

13. (Original) The QCTC generating apparatus of claim 9, wherein the QCTC generator comprises:

- a circular buffer memory for storing the serially concatenated symbol sequence; and
- a symbol selector for generating the sub-code by selecting the predetermined number of symbols from the serially concatenated symbol sequence at the given starting position according to the given code rate.

14-16. (Cancelled)

17. (Original) A QCTC (Quasi-Complementary Turbo Code) generating method comprising the steps of:

receiving information bits;

generating an information symbol sequence and a plurality of parity symbol sequences by encoding the information bits symbol sequence, the plurality of parity symbol sequences being generated from constituent encoders, at least one parity symbol sequence being generated from each of the constituent encoders, and the at least one parity symbol sequence from one constituent encoder corresponding to the at least one parity symbol sequence from another constituent encoder;

outputting an information symbol sequence and the plurality of parity symbol sequences;

individually interleaving the information symbol sequence and the parity symbol sequences; generating a new parity symbol sequence by multiplexing the interleaved symbols of the corresponding parity symbol sequences;

serially concatenating the interleaved information symbol sequence and the new parity symbol sequence; and

generating a sub-code of a QCTC with a given code rate by ~~recursively~~ selecting a predetermined number of symbols from the serially concatenated symbol sequence at a given starting position according to the code rate.

18. (Original) The QCTC generating method of claim 17, wherein the interleaving step is performed by PBRO (Partial Bit Reversal Order) interleaving.

19. (Original) The QCTC generating method of claim 17, wherein the given starting position is the position of a symbol following the last symbol selected for the previous transmission.

20. (Original) The QCTC generating method of claim 17, wherein the QCTC generation step comprises the steps of:

repeating the serially concatenated symbol sequence; and

generating the sub-code by selecting the predetermined number of symbols from the repeated symbol sequence according to the given code rate.

21. (Original) The QCTC generating method of claim 17, wherein the QCTC generation step comprises the steps of:

storing the serially concatenated symbol sequence in a circular buffer memory; and

generating the sub-code by selecting the predetermined number of symbols from the circular buffer memory at the given starting position according to the given code rate.